NOTAS

HUMAN ENVENOMATION BY AN AGLYPHOUS COLUBRID SNAKE, *LIOPHIS MILIARIS* (LINNAEUS, 1758)

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In Brazil, some snakes of the family Colubridae, usually regarded as not venomous, are responsable by serious and even so fatal accidents. Some opisthoglyphous snakes that occur in southern Brazil, as *Philodryas olfersii* (Lichtenstein, 1823), *Boiruna maculata* (Boulenger, 1896), *Phalotris lemniscatus trilineatus* Boulenger, 1889 and *Thamnodynastes strigatus* (Günther, 1858) deserve greatest attention because they have already caused human envenomation as reported by many authors (Hoge, 1952; Lema, 1978a; Salomão & Di-Bernardo, 1995; Santos-Costa *et al.*, in press). There is at least one record of a fatal accident caused by *Philodryas olfersii* (Salomão & Di-Bernardo, 1995) and many other records of serious accidents, with the patients showing edema, pain and enlarged axillary lymph nodes (Nickerson & Henderson, 1976; Silva & Buononato, 1984; David & Ineich, 1999). *Phalotris lemniscatus trilineatus*, a fossorial snake, deserves attention by the gravity of its envenomation, which may causes hemorrhagic manifestations, local pain, paresthesia and acute renal failure (Lema, 1978b).

Accidents by aglyphous snakes are little reported. Some species may cause high-gravity envenomations, like *Rhabdophis tigrinus* (Boie, [illegible] hemorrhagic manifestations and blood coagulation disorders. In Japan some deadly cases were registered (Mittleman & Goris, 1976; Ogawa & Sawai, 1986; David & Ineich, 1999). Seib (1980) suffered an accident by *Urotheca elapoides* (Cope, 1860) and presented intense local pain followed by ecchimosis and inflammation of the axillary lymph nodes. He was successfully treated with anti-Crotalus serum.

At 20h 40min of November 4th, 1996, in the Municipality of Capinzal, State of Santa Catarina, Brazil, the junior author (33 years old, 1.76 m high, 71 kg weight) was bitten in the fifth finger of the right hand while capturing a juvenile *Liophis miliaris* (Linnaeus, 1758) (27,45g; 472,0 mm total length; housed in Museu de Ciências e Tecnologia da PUCRS under number MCP 7763). While biting, the snake chewed several times, releasing after few seconds. Subsequently there was intense local bleeding and, three minutes later, edema, first on finger and progressively expanding to the entire hand and wrist, with intense itching, local pain and paresthesia, the latter on the right side of the hand. This process continued for 40 minutes, evolving to the cure without treatment.

The paresthesia and edema reported in this case are probably consequences of the proteolytic properties of the saliva. Experiments testing extracts of oral glands of the aglyphous *Sibynomorphus neuwiedi* (Ihering, 1910) showed proteolytic activity on casein; this same extract, inoculated in rats and slugs, occasioned change of behaviour and paralysis (Lapor- [illegible] also accounted, regarding [illegible] *dophis tigrinus tigrinus* (Sakai *et al.*, 1990). Although the patients mentioned in that report suffered serious blood coagulation disorders, this fact was not observed in the present case.

Little is known on the chemical nature of the

saliva of aglyphous snakes, and what to do in the presence of accidents with signs of envenomation. We propose a revaluation of the concepts related to envenomations caused by snakes generically called 'not venomous', and intend to alert professionals of the health area about the necessity of attending carefully accidents involving these animals.

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